Nos. 78-911 & 78-1036

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IN THE

Supreme Court of the United States

OCTOBER TERM, 1978

INDUSTRIAL UNION DEP'T, AFL-CIO,
Petitioner,

v.

AMERICAN PETROLEUM INSTITUTE, *et al.*,
Respondents,

and

RAY MARSHALL, SECRETARY OF LABOR,
Petitioner,

v.

AMERICAN PETROLEUM INSTITUTE, *et al.*,
Respondents.

On Petitions for a Writ of Certiorari to the United States Court of Appeals for the Fifth Circuit

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JOINT MEMORANDUM IN OPPOSITION FOR RESPONDENTS THE AMERICAN PETROLEUM INSTITUTE, ET AL., THE RUBBER MANUFACTURERS ASSOCIATION, ET AL., THE CHEMICAL SPECIALTIES MANUFACTURERS ASSOCIATION, E. I. DU PONT DE NEMOURS & CO., AND THE INDEPENDENT PETROLEUM ASSOCIATION OF AMERICA

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This memorandum is submitted jointly by the American Petroleum Institute ("API"), *et al.*,[1] the Rubber

[1] API files this opposition memorandum on behalf of itself, the National Petroleum Refiners Association, and all petroleum com-

Manufacturers Association ("RMA"), *et al.*,[2] the Chemical Specialties Manufacturers Association, E. I. du Pont de Nemours & Co., and the Independent Petroleum Association of America, in opposition to the petitions for a writ of certiorari filed on behalf of the Secretary of Labor ("OSHA")[3] and the Industrial Union Department, AFL-CIO ("IUD"),[4] asking this Court to review the Fifth Circuit's decision in *American Petroleum Institute* v. *OSHA*, 581 F.2d 493 (1978) (the "API decision"). App. 1a-33a.[5]

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pany respondents in this case specifically: American Petrofina, Incorporated, Atlantic Richfield Company, Cities Service Company, Exxon Corporation, Gulf Oil Company, Marathon Oil Company, Phillips Petroleum Company, Shell Oil Company, South Hampton Oil Company, Standard Oil Company (Indiana), Standard Oil Company of Ohio, Sun Oil Company of Pennsylvania, Sun Oil Company of Delaware, Texaco, Inc., and Union Oil Company of California.

[2] RMA files this opposition memorandum on behalf of itself and all other rubber industry respondents, which are listed at n.1 of a separate joint opposition memorandum filed today. See n.6, *infra*.

[3] Petition for a Writ of Certiorari, filed December 26, 1978, by the Solicitor General on behalf of the United States Department of Labor (hereinafter "OSHA Pet."). The Secretary of Labor is authorized by the Occupational Safety and Health Act of 1970, 29 U.S.C. §§ 651 *et seq.* ("the Act" or "the OSHA Act") to promulgate mandatory occupational safety and health standards. The Secretary's responsibilities in this regard have been delegated to the Assistant Secretary of Labor for Occupational Safety and Health, the head of the Occupational Safety and Health Administration ("OSHA"). 41 Fed. Reg. 25059.

[4] Petition for a Writ of Certiorari, filed December 7, 1978, by the Industrial Union Department, AFL-CIO (hereinafter "IUD Pet."). IUD was an intervenor on the side of OSHA in the proceeding below.

[5] "App." refers to the appendix submitted by IUD in No. 78-911. References to the record are abbreviated as follows: Transcript: "Tr."; Exhibit: "Ex."

QUESTION PRESENTED[6]

OSHA and IUD attempt to lull this Court into accepting review by (i) posing hypothetical questions never decided by the court below (OSHA Pet. 2; IUD Pet. 2), and by (ii) erroneously claiming that the API decision will "cripple[] the Secretary's ability to deal with substances that cause cancer." OSHA Pet. 16 n.9; *see also* OSHA Pet. 14, 19; IUD Pet. 12, 16. But, in reality, the court below decided only a limited issue of first impression critically dependent on the factual record in this case.

In light of this record, which the Fifth Circuit analyzed in detail, the decision below is perfectly sensible. The undisputed facts are that no one has been able to show any cancer hazard from benzene exposure below 100 parts per million ("ppm"), despite exhaustive scientific research and years of practical experience with low-level benzene concentrations. Given these facts, Judge Charles Clark, for the court below, held simply that, before lowering the permissible exposure limit ("PEL") from 10 to 1 ppm, OSHA must develop "rough but educated" estimates of the risks from exposure below 10 ppm and utilize such estimates to show a "reasonable relationship" between the "one-half billion dollar" costs and the lowered risks (i.e., health benefits) attributable to reducing exposure to 1 ppm.

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[6] This memorandum deals exclusively with the decision of the court below setting aside OSHA's permissible airborne exposure limit for benzene. OSHA's Petition raises a second issue regarding dermal exposure provisions which is addressed in a separate Joint Memorandum in Opposition on the dermal exposure issue, filed today on behalf of the same respondents joining in this memorandum. In order to make this presentation as concise as possible, we incorporate by reference the jurisdictional statement and statutory provisions set forth in the dermal exposure brief.

Only by following such a process can OSHA show that reducing the existing 10 ppm standard to 1 ppm is "reasonably necessary" under the OSHA Act.

By any fair reading of the Fifth Circuit's decision, the only question properly before this Court is: Whether the court below correctly held that "substantial evidence does not support OSHA's conclusion that the benefits of [a 1 ppm PEL] are likely to be appreciable," where OSHA cites *no* evidence supporting its "appreciable benefits" finding, and where the best available record evidence shows that "rough but educated" benefits estimates can be, and actually have been, developed for benzene. *See* App. 18a, 19a n.23, 21a.

The Fifth Circuit's resolution of this question does not conflict with the decisions of other circuits. Indeed, in previous cases reviewing OSHA health standards, the issue of estimating health benefits was, for reasons peculiar to the facts of those cases, never even raised by the parties, much less addressed or decided by the reviewing courts. *See* pp. 19-25, *infra.*

Nor will the API decision "cripple" OSHA's regulation of benzene or other toxic substances. The record in this case (not to mention the regulatory experience of other federal health and safety agencies),[7] provides

[7] For example, the Environmental Protection Agency ("EPA") and the Consumer Product Safety Commission ("CPSC") both routinely prepare benefit estimates for substances being regulated. *See* EPA's "Interim Procedures for Regulatory Decisions Involving Suspect Carcinogens," 41 Fed. Reg. 21402 (May 25, 1976), CPSC's "Interim Policy" for Carcinogens, 43 Fed. Reg. 25658, 25664 (June 13, 1978).

Indeed, both EPA and CPSC have drafted risk assessments for benzene. *See* EPA Carcinogen Assessment Group, *Population Risk of Ambient Benzene Exposures* (October 1977) (hereinafter "EPA Benzene Risk Assessment") (submitted to the court below by OSHA itself); CPSC Proposed Regulation of Benzene, 43 Fed. Reg. 21838, 21841 (May 19, 1978) (discussing risk assessment prepared by CPSC's Health Sciences staff). Both risk assessments are currently being reconsidered in light of detailed comments submitted by API and other interested parties.

the basis for further benzene proceedings and confirms that the process specified by the court below is likely to work in future cases as well. Moreover, the important general issue of how to make greater use of benefit estimates in regulating toxic substances is currently the subject of high-level interagency review,[8] and OSHA itself is about to complete a mammoth, "generic" rulemaking proceeding to decide, *inter alia,* how quantitative risk assessments should be utilized in regulating occupational carcinogens.[9]

COUNTERSTATEMENT OF THE CASE

In their respective Statements, OSHA and IUD not only misconstrue and exaggerate the Fifth Circuit's holding and its practical consequences, but, more importantly, they ignore virtually all of the extensive record evidence which prompted the court below to set aside OSHA's 1 ppm PEL for benzene. The purpose of this Counterstatement, therefore, is to summarize the evidence omitted by OSHA and IUD and to explain its critical significance for the limited ruling made by the court below.

[8] *See* p. 29 & n.62, *infra.*

[9] *See* "Proposed Rule for the Identification, Classification and Regulation of Toxic Substances Posing a Potential Occupational Carcinogenic Risk," 42 Fed. Reg. 54148 (October 4, 1977), and discussion p. 30 & n.63, *infra.*

A. Background of the Benzene Standard

As they tried unsuccessfully to do in the Fifth Circuit, both OSHA and IUD seek to leave this Court with the erroneous impression that occupational exposure to benzene constitutes an actual health emergency requiring immediate and drastic action. But, in fact, there is no evidence of any cancer hazard from exposure below 100 ppm, and the relatively few workers presently exposed above 1 ppm are adequately protected by the current 10 ppm benzene standard. 29 C.F.R. § 1910.1000 Table Z-2 (1977). Even though the evidence indicates that benzene may be linked to leukemia from exposures above 100 ppm, no workers are currently exposed to such concentrations and no workers are dying of benzene-leukemia.[10]

Rather than being some sort of exotic "poison" (IUD Pet. 11), benzene is actually a common organic compound naturally present in water supplies, animal and plant matter, many foods,[11] and, most significantly, in crude oil, where it occurs in amounts from trace levels to more than one percent by liquid volume.[12] Benzene is also manufactured in the petroleum refining process for use in the petrochemical industry and in the production of gasoline. App. 6a.

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[10] *See* p. 11 & n.26, *infra*.

[11] Testimony of Dr. Herman Kraybill (National Cancer Institute) Ex. 84.B-18, app. A at 2-3, Tr. 1176, 1192-94; Testimony of Edward Baier (National Institute of Occupational Safety and Health), Ex. 84.A at 7, Tr. 749-50, 1132; Mobil Research and Development Corp. Memorandum, Ex. 117.

[12] Testimony of Harold A. Galloway, Ex. 115.A-4 at 2-3, 5-7, Tr. 1465; Testimony of R. J. Comeaux, Ex. 115.A-2 at 2-4.

Because its presence is so widespread, hundreds of thousands of workers, and tens of millions of other persons, including especially motorists, are exposed to small amounts of benzene ranging up to 1 ppm.[13] Notwithstanding this nearly universal exposure to measurable benzene concentrations, no epidemic of leukemia is occurring. Moreover, despite OSHA's effort to portray benzene exposure as a serious health hazard for "some 629,000 workers" (OSHA Pet. 14 n.9), the record shows that, under the current 10 ppm standard, no more than about 30,000 workers are exposed in excess of 1 ppm,[14] and, even among such workers, there is no increased incidence of leukemia. *See* p. 11 & n.26, *infra*.

The history of occupational controls on benzene exposure is recounted by the Fifth Circuit. App. 7a-8a. Although early controls were aimed principally at the non-leukemogenic, toxic effects of benzene exposure, the evidence prior to 1977 also pointed to a relationship between exposure to high concentrations of benzene (in excess of 100 ppm) and leukemia. Taking this evidence into account, a number of scientific bodies, including the National Academy of Sciences, the prestigious International Workshop on the Toxicology of Benzene, and the National Institute of Occupational Safety and Health ("NIOSH"),[15] endorsed the 10 ppm PEL es-

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[13] *See* Exs. 93.A, 93.G-1, 93.G-2 (NIOSH service station exposure data). Natural ambient background levels of benzene approach 0.5 ppm. *See* authorities cited in n.11, *supra*.

[14] Arthur D. Little, Inc., *Economic Impact Statement for Benzene* 1-7 (May 1977) (Ex. 5). Arthur D. Little was OSHA's economic contractor for the benzene standard.

[15] National Academy of Sciences ("NAS"), *A Review: Health Effects of Benzene* ii (June 1976) (Ex. 2-4); International Work-

tablished by OSHA in 1971—which NIOSH termed a "conservative limit" designed to "prevent all adverse effects including leukemia from benzene exposure." [16]

In April 1977, however, the so-called Infante Report was released, finding excess leukemia among pliofilm workers purportedly exposed to very low benzene concentrations during the 1940's.[17] OSHA seized on this report, claiming that it linked leukemia and benzene concentrations "significantly below . . . 10 ppm," [18] and immediately issued an emergency temporary standard ("ETS") under Section 6(c) of the Act, 29 U.S.C. § 655(c), reducing the PEL from 10 to 1 ppm and imposing extensive monitoring, medical surveillance and other requirements.[19]

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shop on the Toxicology of Benzene, *Final Report* 7 (November 11, 1976) (Ex. 17); NIOSH, *Criteria for a Recommended Standard: Occupational Exposure to Benzene* (1974) (Ex. 2-3).

[16] Memorandum of Dr. Herbert E. Christiansen (NIOSH) (Nov. 13, 1974) (Ex. 32.B). NIOSH later recommended a reduction from 10 to 1 ppm in its *Revised Criteria for a Recommended Standard: Occupational Exposure to Benzene* (Aug. 19, 1976) (Ex. 2-5). While IUD highlights this revised recommendation (IUD Pet. 5-6), IUD neglects to add that NIOSH's revision relied almost exclusively on University of North Carolina (UNC) epidemiologic studies which NAS, the authors of the studies, and OSHA itself, all rejected as inconclusive. NAS, *Health Effects of Benzene, supra* n.15 at 13; Testimony of Dr. Herman Tyroler (UNC), Ex. 161 at 2, Tr. 3105, 3114-15; App. 112a.

[17] P. Infante, *et al.*, "Leukemia Among Workers Exposed to Benzene" (April 28, 1977) (Ex. 40).

[18] OSHA Opposition to Stay Pending Judicial Review at 9-10, API v. OSHA, No. 77-1973 (5th Cir., filed June 1, 1977).

[19] 42 Fed. Reg. 22516 (May 3, 1977) (Ex. 1). Thus, IUD's suggestion (IUD Pet. 6) that the ETS was in response to NIOSH's 1976 revised recommendation is inaccurate. *See* n.16, *supra*.

The American Petroleum Institute and nineteen member companies promptly challenged OSHA's ETS in the Fifth Circuit. Petitioners' investigations soon revealed that the workers studied by Infante *et al.* had actually been exposed to very high benzene concentrations well in excess of 100 ppm. Based on this and other information, one judge of the Fifth Circuit granted a stay, which was continued after briefing and oral argument before a three-judge panel of that court.[20] Simultaneously with the issuance of the stay, the case was transferred to the D.C. Circuit which, after further briefing, retransferred to the Fifth Circuit and maintained the stay in effect.[21]

By statute, issuance of an ETS automatically triggered the publication of a proposed revision in the existing permanent benzene standard. 29 U.S.C. § 655(c)(3). Hearings on OSHA's proposed standard (which was essentially identical to the 1 ppm ETS stayed by the courts)[22] began on July 19, 1977. At the hearings, compelling evidence was developed showing that OSHA's 1 ppm proposal was unnecessary and favoring retention of the existing 10 ppm PEL.[23]

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[20] API v. OSHA, No. 77-1973 (5th Cir., Orders dated May 19 and June 6, 1977).

[21] Industrial Union Dep't., AFL-CIO v. Bingham, 570 F.2d 965, 187 U.S. App. D.C. 56 (1977).

[22] 42 Fed. Reg. 27452, 27460-64 (May 27, 1977) (Ex. 4).

[23] Of equal importance were numerous other provisions of the proposed standard supposedly ancillary to the PEL. These provisions required periodic monitoring and medical surveillance at the majority of the nation's *700,000* oil and gas wells, as well as at hundreds of thousands of additional workplaces in pipeline operations, refineries, chemical plants and bulk terminals for marketing refined petroleum products. Testimony of Harold Galloway, Ex.

First, as emphasized by testimony of the Infante authors themselves, the hearings left no doubt that OSHA had gone "off the deep end" by proposing a 1 ppm standard based on the Infante Report.[24] Thus, the record conclusively shows (as OSHA now concedes and the court below found) that the workers studied by Infante were actually exposed to "around 100 ppm during most of the period studied with occasional exposure levels as high as several hundred parts per million." App. 8a n.13, 105a.

But record evidence favoring retention of the current 10 ppm standard went far beyond showing the Infante Report to be just another reported association between very high benzene exposures and an increased incidence of leukemia. For example, a comprehensive reexamination of previous reports linking leukemia and high-level benzene exposure showed that the increased incidences of leukemia reported by Aksoy, Vigliani and Infante—the key data relied on by OSHA—had been completely eliminated once benzene exposures were

115.A-4 at 5-7; App. 148a; Testimony of Keith E. Bailey, Ex. 115.A-1 at 3-5; Testimony of R. J. Comeaux, Ex. 115.A-2 at 4-7; Testimony of John R. Sexton, Ex. 115.A-10 at 4-8, 20-23. Together these requirements comprised approximately two-thirds of the total operating cost of complying with the standard. Testimony of Dr. Richard Zeckhauser, Ex. 115.A-12 at 15. Because essentially all of these workers are already exposed to benzene under 1 ppm, these provisions can fairly be characterized as extraordinarily costly, "busywork" requirements which would yield no health benefits whatsoever. Post-Hearing Brief of API 141-46 (Ex. 217-33) ("API Post-Hearing Br."); App. 148a, 150a, 188a-190a.

[24] Testimony of Ronald Young, Tr. 815-16. Dr. Infante and Edward J. Baier, Deputy Director of NIOSH, also rejected OSHA's interpretation of the study. Tr. 1137-40.

reduced below 100 ppm.[25] The same conclusion emerged from four separate, large-scale studies (totaling well over 60,000 workers), each showing no unexpected incidence of leukemia among workers exposed for many years to low concentrations of benzene.[26]

When considered together, this record establishes a far greater likelihood of a practical threshold for safe exposure to benzene than for any chemical substance previously regulated by OSHA.[27] But respondents and other hearing participants did not rest their case exclusively, or even principally, on this uniquely strong showing of a threshold.

Specifically, respondents argued that OSHA must assess and consider the extent of the leukemia risk from benzene exposure below 10 ppm before reducing the

[25] The details of this reexamination were accepted by the court below. App. 8a n.13. They are described in greater detail in API Post-Hearing Br., *supra* n.23 at 56-57, 61-65.

[26] *See*, Thorpe, *Epidemiologic Survey of Leukemia in Persons Potentially Exposed to Benzene*, Ex. 2-34; Tabershaw/Cooper, *A Mortality Study of Petroleum Refinery Workers*, Ex. 2-59; Tabershaw/Cooper, *Follow-up*, Ex. 115.B-3 at ex. 3; Stallones & Syblik, *Report on Mortality from Leukemia*, Ex. 115.C-2; J. W. Lloyd, "Long-Term Mortality Study of Steel Workers, V," Ex. 113; C. K. Redmond, *et al.*, "Long-Term Mortality Study of Steel Workers, VI," Ex. 217-27.D; C. K. Redmond, *et al.*, "Cancer Experience Among Coke By-Product Workers," Ex. 217-27.C. The results of these studies are summarized in API Post-Hearing Br., *supra* n.23 at 65-75; and Testimony of the Principal Representative of the American Iron and Steel Institute 7-10 (Ex. 156-1).

In addition to these studies reflecting actual experience with benzene exposure, more than 35 post-1970 scientific studies were presented at the hearing which indicated the existence of thresholds for safe exposure to carcinogens in general and benzene in particular. API Post-Hearing Br., *supra* n.23 at 80-91 and app.

[27] *Compare* p. 21 & n.45, *infra*.

PEL to 1 ppm.[28] Respondents contended that once this is done, and even assuming no threshold (and hence some leukemia risk below 100 ppm), the risk from exposure below 10 ppm is likely to prove minimal.

The record unquestionably shows that OSHA has both the capability and resources to perform such analysis. For example, OSHA's economic contractor for the benzene standard, Arthur D. Little, Inc., testified that it was capable of developing such estimates, but that OSHA never permitted it to do so.[29] Similarly, the record shows that other agencies routinely assess risks and benefits in comparable situations,[30] and that EPA was, in fact, preparing a risk assessment for benzene.[31]

While exact quantification of the risk at low levels may be "on the frontiers of scientific knowledge," [32] economists at the hearings uniformly testified that even an imprecise risk estimate would be "of immense value" in assessing the reasonableness of OSHA's 1

[28] In this contention, respondents were supported by government agencies such as the President's Council on Wage and Price Stability and the Department of Health, Education and Welfare. App. 160a; Letter of Charles Custard, Director, HEW Office of Environmental Affairs (July 12, 1977) (Ex. 205.A).

[29] Testimony of Dr. Lawrence Partridge of Arthur D. Little, Inc., Tr. 512, 515, 518.

[30] Among the agencies mentioned were the Nuclear Regulatory Commission ("NRC") and the National Highway Traffic Safety Administration ("NHTSA"). Testimony of Dr. Richard Zeckhauser, Tr. 2108; Testimony of Dr. Richard Wilson, Tr. 2710, 2750-51. *See also* n.7, *supra;* n.63, *infra.*

[31] Testimony of James Durham (EPA Office of Air Quality Planning and Standards), Tr. 2356. *See* nn. 35, 57, *infra.*

[32] Testimony of Dr. Richard Zeckhauser, Tr. 2192.

ppm standard.[33] A preliminary risk assessment prepared by Dr. Richard Wilson of Harvard University dramatically illustrated this point. Using worst-case methodology, Dr. Wilson calculated that OSHA's 1 ppm standard might prevent, at most, two cases of cancer every six years at a cost of $300 million per case.[34] Although Dr. Wilson's estimates were admittedly preliminary, it is significant that their general accuracy was later confirmed by by EPA's Benzene Risk Assessment, submitted by OSHA to the court below.[35]

[33] Testimony of Dr. Richard Zeckhauser, Ex. 115.A-12 at 12, *passim*, Tr. 2104-2112, 2141-2202, *passim;* Testimony of Dr. Richard Wilson, Ex. 149.B at 27, Tr. 2706; Testimony of Dr. James Henderson, Ex. 115.A-5 at 6, 10.

Dr. Zeckhauser, for example, repeatedly emphasized that *ranges* and *upper bounds* of estimated health benefits would be "of immense value," and more than adequate for a useful assessment of the cost-effectiveness of OSHA's benzene standard. Testimony of Dr. Richard Zeckhauser, Ex. 115.A-12 at 12, Tr. 2117, 2153, 2157, 2167-68, 2169-70, 2186.

[34] Testimony of Dr. Richard Wilson, Tr. 2749-50, Ex. 149.B at 19-29.

[35] App. 19a n.23. OSHA originally submitted the EPA Benzene Risk Assessment (n.7, *supra*) to the court below in an effort to discredit the preliminary Wilson estimate. In answer, respondents before this Court provided an analysis showing that the EPA's and Wilson's estimates were virtually identical once EPA's estimates were converted from the *environmental* context (involving continuous, life-time (70 year) exposure of the entire U.S. population) to the *occupational* context (involving exposure of 30,000 workers to over 1 ppm for one-third of each of about 240 workdays per year for a *work*life (40 years)). As converted to the occupational context, EPA's risk assessment projects that OSHA's 1 ppm standard will prevent *one case* of acute, non-lymphocytic leukemia (the specific type of leukemia linked to benzene exposure) *every 15 to 38 years. See* Affidavit of Steven H. Lamm, filed June 21, 1978.

B. The Final Standard

Despite this record evidence, OSHA's final benzene standard adopted a 1 ppm PEL and broadened even further the expensive, and largely unnecessary, ancillary requirements of the standard.[36] Although OSHA recognized the Infante Report as simply another high-exposure study (App. 104a-107a), it failed even to address most of the practical threshold evidence presented at the hearings. Instead, OSHA retreated to a conclusive "policy judgment" that there is no threshold for safe exposure to any carcinogen, and that it is "therefore" necessary to reduce benzene exposure to the lowest level technologically possible consistent with the continued existence of the industries regulated by the standard. App. 124a.

Based on this "policy judgment", OSHA assumed —rather than demonstrated by substantial evidence— that a 1 ppm PEL was required. Thus, OSHA did not (and could not) cite any record evidence documenting a leukemia risk under 10 ppm. Nor did OSHA attempt to estimate the risk (if any) below 10 ppm. App. 158a-163a. Nevertheless, OSHA purported to find justification for its 1 ppm PEL by speculating that benefits "are likely to be appreciable." App. 162a.

Although conceding the utility of benefit estimates,[37] OSHA never addressed the record evidence on this

[36] Some aspects of the expanded coverage of the final standard, and subsequent amendments thereto, are discussed in respondents' Joint Memorandum in Opposition on the dermal exposure issues, filed today. *See also* n.23, *supra*.

[37] OSHA stated that the requirements of Section 6(b)(5) of the Act "*do*[ ] *not mean* . . . that a systematic evaluation of costs and benefits is not to be encouraged within the limits of the estimation techniques." App. 159a (emphasis added).

issue. For example, OSHA stated that it was "unwilling to rely" on Dr. Wilson's estimate of low-exposure risks, but gave no reasons for its "unwillingness" except to recite the results of the high-exposure Infante Report. App. 161a.[38] To be sure, OSHA did conclude, without reference to *any* record evidence whatsoever, that "a *precise* quantitative relationship cannot be established," and that "it is impossible to *precisely* quantify the anticipated benefits." App. 160a, 162a (emphasis added). But OSHA never addressed the comments of industry and government participants who noted that precision may not be possible but urged that rough but useful estimates could be—and have been—prepared for benzene.

OSHA's final standard was immediately challenged, with petitions for review filed in various circuits consolidated in the Fifth Circuit. In addition to the 1 ppm PEL, petitioners challenged the necessity for the sweeping and costly monitoring, labeling, training, medical surveillance and related provisions contained in the final standard.[39] Based on the irreparable injury which would result from the implementation of these provisions, as well as an overall likelihood of success on the merits, the benzene standard was stayed pending review following argument before the Fifth Circuit on April 18, 1978. App. 10a.

[38] App. 161a. OSHA did not explain how, absent a quantitative risk assessment, the incidence of leukemia in the 100 ppm Infante Study can be related to the risk under 10 ppm.

[39] *See* nn.23, 36, *supra*. The validity of these provisions was never reached by the court below because they were set aside as ancillary to the unsupported 1 ppm PEL. App. 21a-22a, 33a.

C. The Opinion Below

The court of appeals announced its decision on the merits on October 5, 1978. The crux of its holding was that "*substantial evidence does not support* OSHA's conclusion that the *benefits* [of a 1 ppm PEL] are likely to be *appreciable.*" App. 18a (emphasis added). According to the court, "OSHA merely assumed that benefits from the reduction [of the existing standard] 'may be appreciable' " (App. 17a), without ever responding to record evidence that the benefits would be minute or employing the admitted capability of its own contractor to estimate benefits. As a result, the court set aside OSHA's 1 ppm PEL because "Congress intended for OSHA to regulate on the basis of more knowledge and *fewer assumptions* than *this record* reflects." App. 21a (emphasis added).

The path that the court followed in reaching this "substantial evidence" determination is best seen from the two separate contentions made by petitioners below. Thus, as before OSHA, petitioners challenged OSHA's finding "that no known safe level for benzene exposure exists." App. 13a. But petitioners' "principal argument" was that "substantial evidence and the best available evidence do not show that reduction of the permissible exposure limit from 10 ppm to 1 ppm is reasonably necessary to provide safe or healthful employment and places of employment." App. 10a-11a.

The court ultimately rejected petitioners' first argument even though it largely accepted petitioners' contention that the factual evidence pointed to a "safe level for benzene exposure" well in excess of 10 ppm. App. 8a n.13, 13a n.20. The reason for this was the court's conclusion (consistent with previous cases) that "[t]he

divided opinion in the scientific community over the existence or not of safe threshold levels to carcinogens provides substantial evidence that would support the finding that exposure to benzene at the present level of 10 ppm poses some leukemia risk." App. 18a.

But regarding petitioners' "principal" argument, the Court was unwilling to make the further assumption that the benefits of a reduction from 10 to 1 ppm would be "appreciable"—especially where the record evidence showed no actual hazard below 100 ppm and strongly indicated that any benefits below 10 ppm would be minimal. App. 18a-19a & n.23. In the court's words, OSHA's no threshold finding, even if accepted, "does *not* yield the conclusion that *measurable* benefits will result, and *OSHA is unable to point to any studies or projections supporting such a finding.*" App. 18a (emphasis added).

The court tested these facts against the legal criteria for OSHA standards found in Sections 3(8) and 6(b)(5) of the Act. Based on these statutory provisions, the court concluded that OSHA may not simply assume, without factual foundation, that the benefits of a reduction to 1 ppm will be "appreciable," and use such an unsubstantiated assumption to sustain a standard at that level.

In section 3(8), the term "occupational safety and health standard" is defined as provisions which are "reasonably necessary or appropriate to provide safe or healthful employment and places of employment." 29 U.S.C. § 652(8). The court concluded that, on this record, OSHA could not show by substantial evidence that its benzene standard is *"reasonably necessary"* to achieve this end without at least *"rough but educated*

estimates of the extent of benefits expected from reducing the permissible exposure level from 10 ppm to 1 ppm." App. 21a (emphasis added).

An equally compelling basis for reaching this result was provided by section 6(b)(5). As summarized by the court:

> [T]hat section requires standards to be *feasible*, and it contains a number of *pragmatic limitations* in the form of specific kinds of information OSHA must consider in enacting standards dealing with toxic materials. Those include "the *best available evidence*," "research, demonstrations, experiments, and such other information as may be appropriate," "the latest available scientific data in the field," and "*experience* gained under this and *other health and safety laws*."

App. 16a (emphasis added).

The court concluded that, "[b]y requiring consideration of such kinds of information, Congress provided that OSHA regulate on the basis of knowledge rather than the unknown" (App. 20a)—especially where, as here, the "best" (indeed, the *only*) "available evidence" of the risk posed by benzene exposure below 10 ppm consisted of the EPA and Wilson risk assessments (App. 19a n.23), and the regulatory "experience" of "other health and safety" agencies showed that at least "rough but educated estimates of the extent of benefits" were possible. App. 21a.

REASONS FOR DENYING THE WRIT

I. The API Decision Correctly Resolves A Question Of First Impression Never Before Raised, Much Less Addressed Or Decided, In Previous OSHA Health Standard Cases.

The API decision presents a question of first impression, the resolution of which is closely tied to the unique factual record for benzene. Although petitioners below, like petitioners in two of the three cases cited by OSHA and IUD,[40] argued that there was a threshold level for safe exposure to benzene, the court (consistent with the *SPI* and *AISI* courts) rejected petitioners' contention. App. 18a. But having turned aside the safe threshold argument, the court went on to address a separate question never raised (and therefore never decided) in previous occupational health standard cases —namely, how OSHA should regulate a substance showing minimal (if any) risks below the existing standard where there is a record basis for an imprecise, but useful, estimate of the benefits of reducing the PEL.

For example, *Industrial Union Department* v. *Hodgson* was a challenge by labor unions (*not* by employers) who *accepted* the PEL set by OSHA's asbestos standard but attacked the standard's four-year compliance timetable.[41] Thus, the question of whether OSHA must

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[40] Industrial Union Department, AFL-CIO v. Hodgson, 499 F.2d 467, 162 U.S. App. D.C. 331 (1974) ("Hodgson"); Society of the Plastics Industry ("SPI") v. OSHA, 509 F.2d 1301 (2d Cir.), *cert. denied*, 421 U.S. 922 (1975); American Iron and Steel Institute ("AISI") v. OSHA, 577 F.2d 825 (3d Cir. 1978), *petitions for cert. pending*, Nos. 78-918, 78-919.

[41] The petitioning unions' contentions are set forth at the outset of the opinion, where the court makes clear that no issue concerning the asbestos PEL was raised. 499 F.2d at 470, 162 U.S. App. D.C. 334.

provide an estimate of health benefits simply was not involved in *Hodgson*. OSHA's and IUD's assertions of a "conflict" hinge on nothing more than the early part of the *Hodgson* opinion where the court, in dicta, discusses theoretically the application of the statutory "substantial evidence" test (29 U.S.C. §655(f))—a passage having nothing to do with the completely different question decided by the Fifth Circuit. 499 F.2d at 474-76, 162 U.S. App. D.C. 338-40.[42]

Moreover, the factual record before the *Hodgson* court demonstrates dramatically why employers never challenged the asbestos standard, much less raised the issue of health benefits. There, the evidence strongly suggested that *40 to 60 percent* of workers historically exposed to asbestos were expected to die of asbestosis or cancer,[43] and that *"significant disease"* was found in workers exposed *well below* the *previous* national consensus standard for asbestos.[44]

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[42] The court explicitly characterizes this passage as an abstract "example" of how it would apply the substantial evidence test, 499 F.2d at 475, 162 U.S. App. D.C. 339, and refers to its own preliminary ruminations as "analytical background," 499 F.2d at 478, 162 U.S. App. D.C. 342.

[43] Brief for Petitioners at 6, IUD v. Hodgson (D.C. Cir. No. 72-1713, filed March 29, 1973), *quoting Legislative History of the Occupational Safety and Health Act of 1970*, 92d Cong., 1st Sess. 412-13, 1002 (1971) (remarks of Senator Williams and Congressman Daniels).

[44] Brief for Petitioners at 47, IUD v. Hodgson (D.C. Cir. No. 72-1713, filed March 29, 1973) (emphasis added). Indeed, an unpublished independent analysis of the asbestos standard concluding that it will *prevent 1,596 deaths per year* was recently cited by the Senate Committee on Governmental Affairs in its *Study on Federal Regulation*, 95th Cong., 2d Sess. 42 (December, 1978).

Nor do the *SPI* or *AISI* cases conflict with the API decision. Both involved challenges to OSHA's exposure limits (for vinyl chloride and coke oven emissions, respectively) on the ground that there was no health basis for OSHA's standard because a higher exposure level was supposedly "safe."[45] Like the court below, the Second and Third Circuits rejected this argument. *SPI* v. *OSHA*, 509 F.2d at 1308; *AISI* v. *OSHA*, 577 F.2d at 831-32. In contrast to the API petitioners, however, petitioners in neither the *SPI* nor *AISI* cases raised OSHA's legal obligation to assess benefits once their safe threshold level contentions were rejected.[46]

Again, the factual records of the vinyl chloride and coke oven emissions cases leave little doubt why the contention that OSHA must assess benefits was never raised. The record before the Third Circuit in *AISI* included risk assessments predicting that *hundreds* of lives could be saved *each year* by significant reductions

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[45] In each case, employer petitioners relied on a single epidemiologic study revealing that workers exposed to levels above the challenged PEL showed no unusual incidence of cancer. *See* SPI v. OSHA, 509 F.2d at 1308; AISI v. OSHA, 577 F.2d at 827; Brief for All Petitioners Other Than Republic Steel Corp. and CF&I Steel Corp. at 15-17, and Brief for Petitioner Republic Steel Corp. at 34-35, AISI v. OSHA (3d Cir. No. 76-2358 *et seq.*, both filed May 9, 1977).

Petitioners in SPI and AISI also argued that the levels set by OSHA were technologically infeasible and likely to affect significantly the financial viability of the petitioners' businesses. These contentions were not made in the benzene case.

[46] Without any citation to the opinion, OSHA incorrectly asserts that the *AISI* decision "explicitly" rejects this separate contention. OSHA Pet. 13. In fact, OSHA's claim finds no support in either the court's opinion or the briefs of the parties.

in exposure to coke oven emissions.[47] Similarly, the Second Circuit's *SPI* opinion summarizes what the court called the "morbid" history under the previous 1971 vinyl chloride standard, including thirteen recent deaths from angiosarcoma of the liver, an "exceptionally rare" cancer. 509 F.2d at 1305-06.[48] In addition to these recent deaths, the record also included a low-exposure animal study demonstrating that vinyl chloride was, in the court's words, a "very virulent carcinogen." *Id.* 1308.[49]

In short, the question of whether OSHA must make a "rough but educated estimate[] of the extent of bene-

[47] *See* 41 Fed. Reg. 46750 (October 22, 1976) (Ex. 2.B-275). Risk assessments regarding the coke oven standard were performed by OSHA's economic impact contractor and the President's Council on Wage and Price Stability. It is impossible to say whether these risk assessments would satify the API decision; however, the far greater health hazards shown by these assessments explains why, in contrast to benzene, the issue of OSHA's obligation to estimate the health benefits of its action was never raised by the parties.

[48] Nine of these deaths occurred within a five-month period immediately preceding OSHA's proposal of the standard challenged in *SPI*. 509 F.2d at 1306.

[49] This study showed that of 200 mice exposed to 50 ppm vinyl chloride, 100 died within 11 months, and in each case where a gross post-mortem pathologic examination was made, cancer was found. *See* 39 Fed. Reg. 35891 (October 4, 1974) (Ex. 2.B-276). While the incidence rate for mice may bear an imperfect correlation with the incidence in humans, this 50 percent mortality rate is striking nevertheless when compared to the "exceptionally rare" incidence of liver angiosarcoma in the general population—one in 50,000, or .002 percent. 509 F.2d at 1306. Several witnesses in the benzene hearings, including Dr. Herman F. Kraybill of the National Cancer Institute, testified that vinyl chloride is a much more potent carcinogen than benzene, and the two substances should not be considered in the same category. *E.g.*, Testimony of Dr. Herman F. Kraybill, Tr. 1239-40; Testimony of Dr. Richard Wilson, Tr. 2746-48.

fits," was never argued by the parties nor decided by the courts in any of the previous cases. The court below distinguished these cases both on the grounds that they "were decided on their own records," and that they did not address "what Congress meant by requiring the conditions imposed by standards to be reasonably necessary to provide safe or healthful places of employment." App. 21a. Moreover, in contrast to the extraordinary health hazards discussed in *Hodgson, SPI* and *AISI*, the court emphasized that, with respect to benzene, "OSHA is *unable* to point to *any empirical evidence* documenting a leukemia risk at 10 ppm" or "to *any studies* or *projections* supporting . . . a finding" that "*measurable* benefits will result" from its 1 ppm standard. App. 18a (emphasis added).

Accordingly, it made perfect sense for the Fifth Circuit to conclude that "Congress intended for OSHA to regulate on the basis of more knowledge and fewer assumptions than this record reflects." App. 21a. For to require any less than the limited showing suggested by the Fifth Circuit would give OSHA "unbridled discretion"—no matter how immaterial (or speculative) the risk or how great the cost—to impose whatever controls possible so long as they do not lead to widespread industry shut-downs. App. 15a.

Such a blank check for OSHA simply cannot be squared with the legislative history or purpose[50]

[50] Section 2(b) states Congress' "purpose and policy" to be "to assure *so far as possible every* working man and woman in the Nation safe and healthful working conditions." 29 U.S.C. § 651(b) (emphasis added). As Dr. Richard Zeckhauser repeatedly stressed at the hearings, unless OSHA uses risk assessments to formulate standards which achieve "the greates. health gain per dollar expended," the statutory purpose will be frustrated because fewer

of the Act.[51] Nor can it be reconciled the "reasonably necessary" requirement of Section 3(8) or the "pragmatic limitations" of Section 6(b)(5). OSHA's argument that Section 6(b)(5) forbids consideration of benefits cannot withstand analysis,[52] because Section 6(b)(5) affirmatively requires that OSHA standards be "based on" the "best" and "latest" "available evi-

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resources will remain to combat more serious hazards and accordingly "we will find that we have achieved less for health and safety than we could have," Testimony of Dr. Richard Zeckhauser, Ex. 115.A-12 at 4. See also App. 13a-14a, where the court below discusses this contention.

[51] *See* Turner Co. v. Dep't of Labor, 561 F.2d 82 (7th Cir. (1977). In *Turner*, the Seventh Circuit, relying on a "thorough" analysis of the legislative history (561 F.2d at 85), adopted an interpretation of the Act closely similar to that of the court below. The *Turner* court held that, in the context of an enforcement action, the term "feasible" in an OSHA noise standard must be interpreted as requiring a determination that compliance costs are justified by health benefits in order to pass muster under "the clear intent of Congress and the purpose of the . . . Act." 561 F.2d at 83.

[52] *Compare* n.37, *supra*. Where Congress has intended that absolute health protection be afforded, regardless of the relative costs and health benefits, it has done so in unmistakable terms, as in the "Delaney Clause" of the Food, Drug, and Cosmetic Act. 21 U.S.C. § 348(C)(3)(a).

OSHA suggests the converse—that where Congress intends that costs and benefits be considered, "it has done so explicitly." OSHA Pet. 17. But the example OSHA cites, the Consumer Product Safety Act ("CPSA"), 15 U.S.C. § 2051 *et seq.*, disproves OSHA's thesis. Nowhere in the CPSA is there an explicit requirement that health benefits be considered. Nevertheless, two courts of appeals have held, relying on a "reasonably necessary" requirement in the CPSA (which the court below called "precisely similar" to Section 3(8) of the OSHA Act (App. 15a)), that standards under the CPSA must be based on a consideration of health benefits. Aqua Slide 'N' Dive v. CPSC, 569 F.2d 831 (5th Cir. 1978); D. D. Bean & Sons v. CPSC, 574 F.2d 643 (1st Cir. 1978).

dence," and on "experience gained under . . . other health and safety laws." In this case, risk assessments, such as those prepared by Dr. Wilson and EPA, constitute the "best"—indeed, the *only*—"available evidence" concerning the leukemia risk (if any) posed by benzene exposure below 10 ppm. Similarly, the regulatory "experience" of virtually every other federal health and safety agency shows that similar rough estimates are routinely prepared and used in regulating toxic substances such as benzene.

II. The Fifth Circuit's Requirement That OSHA Make "Rough But Educated" Benefit Estimates Is Workable In Practice And Will Promote Sensible Regulation Of Benzene And Other Substances.

OSHA and IUD advance an exaggerated reading of the decision below and predict drastic regulatory paralysis if the Fifth Circuit is not immediately reversed.[53] Simply stated, OSHA and IUD appear to argue: (i) that the Fifth Circuit imposed "a cost-benefit test" requiring OSHA to demonstrate that a lower exposure level "saves enough lives" to be "commensurate with its known costs" (OSHA Pet. 2, 9; *see also* OSHA Pet. 10, 13, 19); (ii) that OSHA must determine "the *exact* relationship between decreasing levels of expo-

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[53] Curiously, OSHA also attempts before this Court to justify its 1 ppm standard based on the non-leukemogenic, toxic effects of benzene exposure. OSHA Pet. 6, 16 n.9. This belated attempt to reconstruct OSHA's rationale for a 1 ppm standard is directly contrary to the opening sentence of the preamble to the standard, which concedes that: "This standard is based on OSHA's determination . . . that employee exposure to benzene presents a cancer hazard—specifically, the hazard of developing leukemia." App. 67a. Accordingly, the court below correctly held that any effort by OSHA's lawyers to rely on benzene's non-leukemogenic, toxic effects is a "post hoc rationalization." App. 22a-23a.

sure and disease" (OSHA Pet. 8, 9, 13; IUD Pet. 11, 15); and (iii) that such a "precise relationship" cannot be calculated and, as a result, OSHA will be precluded "from regulating [benzene and] many of the other carcinogens present in the workplace" (OSHA Pet. 9, 14, 16, 19; IUD Pet. 16, 18).[54]

This extreme position cannot be supported by either the court's opinion or the record of this case.

The first two points can be dispensed with quickly. Nothing could be plainer than the court's own statement that "the agency does not have to conduct an elaborate cost-benefit analysis." App. 17a. Moreover, the meaning of the expression "reasonable relationship" was left for later amplification because OSHA's failure to assemble an adequate record "makes it impossible to assess the reasonableness of the relationship between expected costs and benefits" here. App. 21a. While it is premature to say how benefits and costs are to be compared under the API decision, it is clear that, even respecting the requirement that OSHA estimate benefits, the court contemplated something short of

[54] OSHA's exaggerated fears of regulatory paralysis as a result of the API decision bear a haunting resemblance to its contentions in Marshall v. Barlow's, Inc., 436 U.S. 307 (1978). In *Barlow's*, this Court ruled that under the Fourth Amendment, OSHA inspections may not be conducted over an employer's objection without a warrant. OSHA's Jurisdictional Statement in *Barlow's* claimed that "the effectiveness of [OSHA's] inspection system would largely be nullified" by such a requirement. Jurisdictional Statement at 10-11, Marshall v. Barlow's, Inc., No. 76-1143 (Sup. Ct., filed Feb. 17, 1977). OSHA made similar claims on the merits. 436 U.S. at 316. The Court, however, was "unconvinced" by these dire predictions. *Id.* 316-20. Subsequently, OSHA issued regulations to implement the *Barlow's* decision. 43 Fed. Reg. 59839 (December 22, 1978).

"exact" or "precise" estimates—namely, "rough but educated estimates of the extent of benefits." App. 21a.

The evidence proving OSHA's capability to make such estimates is uncontradicted. OSHA's own contractor, A. D. Little, admitted that it could prepare an estimate of benefits and offered to do so. App. 19a n.23.[55] One witness, Dr. Wilson of Harvard, actually prepared a preliminary risk assessment showing that OSHA's standard would save, at most, two lives every six years at the cost of three hundred million dollars each.[56] EPA reached a similar conclusion in a risk assessment in preparation during the OSHA hearings and later submitted by OSHA to the court of appeals.[57]

[55] OSHA now complains for the first time that its contractor "did not offer to demonstrate how such a study could be done." OSHA Pet. 15 n.9. The complete answer is that OSHA *never asked*. *See* Industrial Union Dep't v. Hodgson, 499 F.2d at 480 (remanding OSHA's four-year timetable for compliance with the asbestos standard for lack of an adequate record, relying on OSHA's failure to cross-examine expert witnesses on this issue and stating: "the lack of more specific information may be partially attributable to the Secretary's failure to seek it.").

[56] *See* p. 13 & n.34, *supra*. Even though OSHA offered no reasons for rejecting Dr. Wilson's estimate in the preamble to the standard (*see* p. 15 & n.38, *supra*), OSHA's brief now complains that Dr. Wilson supposedly never submitted the basis for his calculations. OSHA Pet. 15 n.9. But OSHA never offers a single substantive criticism of Dr. Wilson's estimate, even though he carefully detailed his technique during three hours of cross-examination by OSHA, NIOSH and union representatives at the hearings. Tr. 2717-2827.

Nor is there any basis for OSHA's unjustified attempt to portray Dr. Wilson as a mere "physicist." In fact, Dr. Wilson is head of Harvard's Energy and Environmental Policy Center and is a leading expert on the techniques of quantitative risk assessment. Testimony of Dr. Richard Wilson, Ex. 149.B at 2.

[57] In light of Dr. Lamm's analysis showing that the EPA estimate is virtually identical to that of Dr. Wilson (*see* n.35, *supra*),

Under these circumstances, there is ample basis for further proceedings on benzene consistent with the court's opinion. Indeed, as an alternative to further agency proceedings, review by this Court is both unnecessary and undesirable. The previous 10 ppm standard remains in effect and, as demonstrated by the record evidence, is fully adequate to protect those workers (about 30,000) who would be exposed to between 10 and 1 ppm benzene during the pendency of additional agency and court proceedings.[58] Moreover, in the inter-

OSHA's lawyers now attempt to discredit even EPA's estimates by grossly misstating EPA's findings and by arguing that they "are not sufficiently precise." OSHA Pet. 15 n.9. In fact, while EPA acknowledged some margin of error, it pointed out that the model it chose was "expected to give an *upper limit* to the estimated risk," and concluded that the *actual* risk "is not likely to be higher" than its estimate, "but it could be lower." EPA Benzene Risk Assessment, *supra* n.7 at 1, 2 (emphasis added). Thus, Dr. Lamm's conversion of the EPA estimate to the occupational context likely represents the *maximum* health savings from the benzene standard.

[58] As previously noted, the courts have uniformly found a stay of the 1 ppm standard to be in the public interest. *See* p. 9 & n.20, p. 15, *supra*.

Nevertheless, IUD would mislead the Court into believing that a health emergency presently exists. IUD notes an estimate of 250 benzene leukemia cases in the United States (IUD Pet. 8), but neglects the author's critical qualification that *all* of these cases "were regarded as the consequence of *heavy* exposure to benzene vapor" many years ago. Statement of Dr. James H. Jandl, Ex. 217-26.B at 103 (emphasis added). OSHA similarly attempts to confuse the Court by erroneously stating that, under EPA's risk assessment, "exposure of the whole population to [benzene] levels even as low as one part per billion for only 24 hours would cause between 30 and 80 cases of leukemia yearly." OSHA Pet. 15, n.9. In fact, the EPA estimate was expressly based on *continuous lifetime* exposure, *not* a single 24-hour episode of exposure. EPA Benzene Risk Assessment, *supra* n.7 at 5, 7, 13. *See also* nn.35, 57, *supra*.

est of avoiding piecemeal litigation, further agency proceedings are a superior alternative since they will allow OSHA to reconsider the many issues pertaining to other provisions of the standard never reached by the court below because the underlying 1 ppm PEL was set aside. App. 21a.[59]

Nor is there any basis for OSHA's prediction of a general regulatory paralysis if the API decision is not immediately reviewed. The court below necessarily spoke only to the record before it. But even on this record, there are strong reasons for believing that the API decision is both workable and desirable as a means of allowing OSHA to distinguish between more or less potent carcinogens and more or less pressing matters for regulatory attention.[60]

Virtually every other federal health and safety agency, including EPA, CPSC, FDA, and NHTSA, already prepares the type of "rough but educated" benefit estimates that OSHA refuses to make for benzene.[61] Moreover, the underlying question of how to improve the use of quantitative risk assessments is currently the subject of a high-level interagency review.[62] And

[59] *See* p. 9 & n.23, p. 15 & n.39, *supra*.

[60] Significantly, OSHA concedes that risk and benefit estimation techniques are useful for this purpose. OSHA Pet. 17 n.10. OSHA takes the wholly illogical stance, however, that although benefit estimates are "an important decision making tool" in deciding to change an existing standard, their use is absolutely prohibited in deciding what level of regulation is appropriate. Nothing in section 6(b)(5) compels this absurd result. *See* pp. 23-25, nn. 50-52, *supra*.

[61] *See* p. 4 & n.7, 12 & n.30, *supra*.

[62] *See* 42 Fed. Reg. 54857 (October 11, 1977) (establishing an Interagency Regulatory Liaison Group ("IRLG") consisting of

OSHA itself is presently conducting an exhaustive examination, encompassing nearly three months of agency hearings, concerning how to regulate occupational carcinogens, including consideration of the role to be played by quantitative risk assessments.[63]

In short, there is every reason to believe that OSHA has the capability of complying with the API decision in any further proceedings on benzene. Indeed, the progressive and sensible nature of the API decision is confirmed by the "experience" of "other health and safety agencies," which (together with OSHA itself) are now developing comprehensive policies for using risk and benefit estimates to decide whether and how to regulate the large number of substances, of widely varying

OSHA, EPA, FDA and CPSC). EPA Administrator Douglas M. Costle has recently stated that "a major goal" of the IRLG is the "[d]evelopment and coordination of a national cancer policy." Bureau of National Affairs, *Environment Reporter*, Vol. 9, No. 37, at 1706 (January 12, 1979).

[63] *See* n.9, *supra*. In nearly three months of hearings, numerous federal health and safety agencies including the Food and Drug Administration ("FDA"), the National Cancer Institute, EPA and CPSC urged OSHA to assess benefits as required by the court below. The President's Council on Wage and Price Stability urged not only that risk assessments be prepared but also that they are required under the OSHA Act. Report of the Regulatory Analysis Review Group of the Council on Wage and Price Stability on OSHA's "Cancer Policy" Proposal 7, 18-21, 24-30 (October 24, 1978) (OSHA Public Docket No. H-90).

potencies, thought to cause cancer.[64] Accordingly, the better course is to let these developments take their natural course and to allow the meaning and practical consequences of the API decision to be amplified by other court of appeals decisions on different factual records.[65]

[64] For example, NIOSH has published a list of 2,415 potential occupational carcinogens, of which 1,905 substances "were selected on the basis of reported neoplastic or carcinogenic effects." NIOSH, *Suspected Carcinogens: A Subfile of the NIOSH Registry of Toxic Effects of Chemical Substances*, 2nd Edition, Herbert E. Christensen (Ed.), HEW Publication No. (NIOSH) 77-149 (December 1976). These substances may differ enormously in carcinogenic potency. The record in this case, for example, shows that benzene is 10,000 times weaker than aflatoxin, a potent carcinogen present in peanuts and peanut butter at tolerance levels set by FDA. Testimony of Dr. Richard Wilson, Tr. 2706, 2721-23, 2726; 39 Fed. Reg. 42748 (December 6, 1974).

[65] This Court may benefit from the resolution of three OSHA health standards presently pending in two circuits (IUD Pet. 15). For example, the issue of how benefits and costs must be weighed in establishing a "reasonable relationship"—an issue not resolved finally by the court below (*see* p. 27, *supra*)—has been raised in pending review proceedings on OSHA's cotton dust standard. Brief of the American Textile Manufacturers Institute, *et al.* at 67-81, AFL-CIO v. Marshall, D.C. Cir. Nos. 78-1562 *et seq.* In another case (arsenic), the petitioners submitted the API decision after oral argument. OSHA takes the position that the API benefit estimation issue is not before the court. Letter dated October 31, 1978 from Lorelie Borland (OSHA counsel) to Emil E. Melti, Jr. (Clerk of the 9th Circuit), Asarco Inc., *et al.* v. OSHA (9th Cir. No. 78-1959). The third case (lead) was recently transferred by the Third Circuit to the D.C. Circuit. Briefs on the merits have not yet been filed.

CONCLUSION

For the foregoing reasons, the petitions for a writ of certiorari filed by OSHA and IUD should be denied.

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